

Abstract

In a thin film magnetic head device including a reading giant magneto-resistive thin film magnetic head element whose electric equivalent circuit is expressed by a series circuit of an equivalent voltage source and a series resistor  $R_H$  and a parallel capacitor  $C$  connected in parallel with said series circuit, an inductor  $L$  is connected in series with said series resistor  $R_H$  and a parallel resistor  $R$  is connected in series with said parallel capacitor  $C$ . The coil  $L$  and parallel capacitor  $C$  are set such that an angular frequency  $\omega_0=1/(LC)^{1/2}$ , an angular frequency  $\omega_1=1/CR$  and an angular frequency  $\omega_H=1/CR_H$  satisfy conditions of  $\omega_0 > \omega_1$  and  $\omega_0 > \omega_H$ , preferably  $\omega_0 \gg \omega_1$  and  $\omega_0 \gg \omega_H$  to extend a frequency characteristic toward a high frequency range.

10005594-422604

01150 (2001-102)